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Subject: EPA HF Study - EPA Stakeholder Meeting Agenda (9/2/11)
Date: 09/02/2011 07:42 AM

Please find the proposed agenda for our weekly EPA HF Study conference call today and the current status of last week's action items below. I would appreciate any feedback or suggestion regarding the topics of discussion.

8/26/2011 Agenda:

- Schedule
- Quality Assurance Project Plan (QAPP)
 - Focus on the baseline sampling program, including soil sampling, monitoring wells (design, location, construction, and geophysical investigation), and analytical methods.
- Communication Plan
 - Data Management
 - Community Communication

Previous Action Items:

- Work with CHK operations to identify an optimum spud date between Jan. 15 and April 31, 2012 (Chris, 8/26/2011 **COMPLETED**)
 - The spud date has been slotted for March 21, 2012, however, may be pushed back by CHK Operations to as late as April 31, 2012 as required by the drilling schedule.
- CHK should provide all comments to the EPA by **September 12th, 2011** (Chris, **IN PROGRESS**).
 - CHK to provide more detail of needed parameters in final comments.
- EPA will ensure SW method equivalents are provided for the selected methods in the final QAPP.
- EPA to provide electronic copies of proposed analytical methods (Bob, 9/2/2011 **IN PROGRESS**)
- EPA is to propose alternative design plan for monitoring well network and soil sampling (Bob, 8/31/2011 **COMPLETED**)
- Develop a draft communication plan (Chris, 9/12/2011 **IN PROGRESS**)
- EPA and/or E&E to develop FTP site for all study data and materials and will provide CHK with access (Bob/Gene, 9/2/2011 **IN PROGRESS**).
- E&E to send CHK typical water well locking vault design (Gene, 9/2/2011 **COMPLETED**)
- Identify experienced water well contractor. (Chris, 8/26/2011 **COMPLETED**)
 - Walker-Hill Environmental – Office in Baton Rouge (<http://www.walkerhillenvironmental.com/>)
 - Layne Christensen Company - Offices in Tyler, Baton Rouge and Jackson MS, among others (<http://www.laynechristensen.com/>)

Thank you,

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The meeting minutes for last Friday's conference call are provided below. I would appreciate if you would keep me honest and let me know if I missed anything from our discussions.

8/26/2011 Minutes:

- Quality Assurance Project Plan (QAPP)
 - CHK has been provided with Draft QAPP for comments.
 - EPA has requested that CHK comment on the entire document, paying particular attention to the sections dealing with flowback and produced water sampling.
 - EPA will need to finalize the QAPP document at the end of September.
 - **ACTION:** CHK should provide all comments to the EPA by **September 12th, 2011.**
 - CHK Preliminary comments were discussed, as outlined in further detail below.
- Sampling Methods and Data
 - Opportunities for improvement in selected key parameters
ACTION: CHK to provide more detail of needed parameters in final comments
 - QAPP currently references EPA Analytical Methods that are not standard SW Series methods. **ACTION:** EPA will ensure SW method equivalents are provided for the selected methods in the final QAPP.
 - CHK requested level of Data Package to be included. EPA will use QA Level 1 and will include standard description in QAPP.
 - CHK has noted that the suggested 15-day period for sampling of produced water should be extended to at least 45 days, or preferably 60-90 days.
 - **ACTION:** EPA to provide electronic copies of proposed analytical methods (Bob, 9/2/2011 **IN PROGRESS**)
 - A separate Sampling and Analysis Plan (SAP) will not be developed.
- Monitoring Wells
 - Current priority is to identify monitoring well location and design.
 - CHK has concerns that necessary sample volumes may cause issues for any low-producing wells. EPA has indicated that studies are ongoing to identify monitoring well locations and avoid any low-producing areas within the aquifer.

- Submersible or bladder pumps will be used for deeper wells.
 - CHK has noted that 18 monitoring wells have been noted in the Draft QAPP (as opposed to the originally discussed 8).
 - Based on ongoing geological study results, this number will possibly be reduced.
 - CHK has indicated the sampling of domestic water wells is not preferable. EPA has indicated that domestic wells will only be used for baseline and comparison samples and will not be included in the monitoring well network.
 - **ACTION:** EPA is to propose alternative design plan for monitoring well network and soil sampling (Bob, 8/31/2011)
- Communication Plan
 - Community Involvement and Communication
 - Landowner agreements are typically handled by EPA. EPA will set up face-to-face meeting to discuss sampling activities and explain study, and to request property access for monitoring wells or to sample domestic wells.
 - Sampling results will be made available to landowners.
 - **ACTION:** Develop a draft communication plan (Chris, 9/12/2011 **IN PROGRESS**)
 - Data Management
 - Data sharing between CHK/EPA will be necessary during study.
 - **ACTION:** EPA and/or E&E to develop FTP site for all study data and materials and will provide CHK with access (Bob/Gene, 9/2/2011 **IN PROGRESS**).
 - Security
 - Security measures are needed for the study location and monitoring wells to avoid tampering and contamination.
 - Monitoring wells are typically installed with steel casing and locking covers.
 - **ACTION:** E&E to send CHK typical water well locking vault design (Gene, 9/2/2011 **IN PROGRESS**)
- Workshop Materials
 - **ACTION:** Send all CHK presentations and abstracts from EPA Technical Workshop to EPA and E&E. (Chris, **COMPLETE**)
- Schedule
 - **ACTION:** Work with CHK operations to identify an optimum spud date in April 2012 (Chris, 9/2/2011 **IN PROGRESS**). Spud date should be decided next week.
- Meetings
 - Meetings will be conducted weekly instead of biweekly until further notice. **ACTION:** Bi-weekly conference call to be changed to weekly (**Chris, COMPLETE**)

- The next meeting will be September 2 , 2011.
- Previous Actions:
 - **ACTION:** Send E&E current version of map for QAPP. (Chris, **COMPLETED**)
 - **ACTION:** Work with CHK operations to identify an optimum spud date between Jan. 15 and April 31, 2012 (Chris, 8/26/2011 **IN PROGRESS**)
 - **ACTION:** Identify experienced water well contractor. (Chris, 8/26/2011 **IN PROGRESS**)
 - Potential Contractors:
 - Walker-Hill (Baton Rouge) - Capable of drilling deep wells using either mud-rotary or roto-sonic methods. Roto-sonic is best to about 300-400 ft, especially if continuous coring is requested. Walker-Hill doesn't have in-house e-logging capabilities, but could subcontract the work out to others (e.g., Century Geophysical (Tulsa)).
 - Layne Company (Offices in Tyler, Baton Rouge and Jackson MS, among others) are the Cadillac of water well drilling. 800-1000 ft water wells are standard. Core business is water well drilling more than a geotech/environmental drilling company. They have very experienced operators, sophisticated equipment and programs. They do large, high profile projects involving large public works and private clients (e.g., Baton Rouge Water Corp). Might provide that sense of professionalism and confidence that this study might benefit from. They have lots of other resources in the company, including in-house e-logging capabilities that include (typical suite) SP, natural gamma, and dual induction resistivity.
- **ACTION:** Send QAPP to CHK. Ensure confidentiality statement is present in the footer. Email sections upon completion. (Gene, 8/19/2011 **COMPLETE**)

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